TLT-1C
User Manual

（GPS/GSM Vehicle Tracker）

V1.2

1 Prelude

1.1 Brief Introduction

The TLT-1C GPS/GSM Vehicle Tracker combines GSM & GPS technology perfectly, owns compact size and elegant appearance, and carries top technology style. It is the typical model of the combination of communication products and GPS/GSM Vehicle Tracker.

This product shows advanced technology strength in GSM & GPS field. As a professional security and locating company, we will provide you more and better products and service.

Before you use it, please spend some time to read this guide to know the operation details, so as to get better service.

The TLT-1C GPS/GSM Tracker is a vehicle remote position device with build-in GPS and GSM/GPRS modules. It is a small size, high accuracy remote location tracking device. Based on GPS satellite, it provides accurate position information under dynamic conditions. Personal remote position device transmit the longitude and latitude coordinate to authorized cell phone.

1.2 Features

1. Support GSM 850/900/1800/1900 MHz. Works worldwide. Excellent for fixing the position even at a weak signal status, work well even in areas with limited sky view like urban canyons
2. High sensitivity, JRC low power GPS chipset.
3. SOS button send out exact location for immediate rescue/action. Support check location and real-time and historical trajectory by SMS or Internet. Support alarm, have 3 preset phone number
4. Support single location and continuous tracking
5. Support cut-off electricity and oil function and recovery command
6. High reliability circuit design, in line with the automotive electronics industry standards

1.3 Caution

1. Please read this handbook carefully and operate in right way, to avoid anything wrong;

2. You need to choose a safe place to install your product, some dangerous places such as car airbag, and somewhere easy to hit driver or passengers when there is an accident, are all unsuitable to place products. Besides, please don’t operate it when driving, to avoid unnecessary accidents.

3. The introduction in this book is just for your reference, if some of the content or operating procedures are different from the real products, please follow the products. If you have any questions please visit our Web site.

2. about the device

2.1 Components

2.2 Specification

GSM module	MTK program, GSM 900/1800/850/1900 dual-band or quad-band Support the TCP protocol
GPS Chipset	JRC chipset
GPS sensitivity	-161dB
C/A Code	1.023MHz chip rate
Channels	65 channel all-in-view tracking
GPS frequency	L1,1575.42MHz
GPS Position Accuracy	2.5 meters, CEP
Velocity Accuracy	0.1m/s
Time Accuracy	Synchronized to GPS time
Cold Start	35sec.,average
Hot Start	1sec.,average
Warm Start	25 sec.,average
Altitude Limit	18,000 meters (60,000feet) max.
Velocity Limit	515 meters/second (1000knots) max.
Acceleration Limit	Less than 4g

Operating temperature	-20°C－65°C
Humidity	5%To 95% Non-condensing
Dimension	95mm*53.5mm*26mm
Voltage	12V

2.3 LED State Description

Blue LED--- indicate the GSM signal state

State	Means
constant Lighting	no SIM card or not GSM net
flashlight once interval 8s	GSM receiver work well and standby

Red LED---indicate charge sate

State	Means
constant Lighting	charging
No light	charging was completed

Green LED--- indicate the GPS signal state

State	Means
No Lighting	Working, but no location
Flashing	Working and has located

2.4 Accessories

1）TLT-1C GPS/GSM Vehicle Tracker

2）Power cord

3）GPS,GSM antenna

4) Headphones

5）Battery

6) User’s manual(CD)

2.5 Install SIM Card

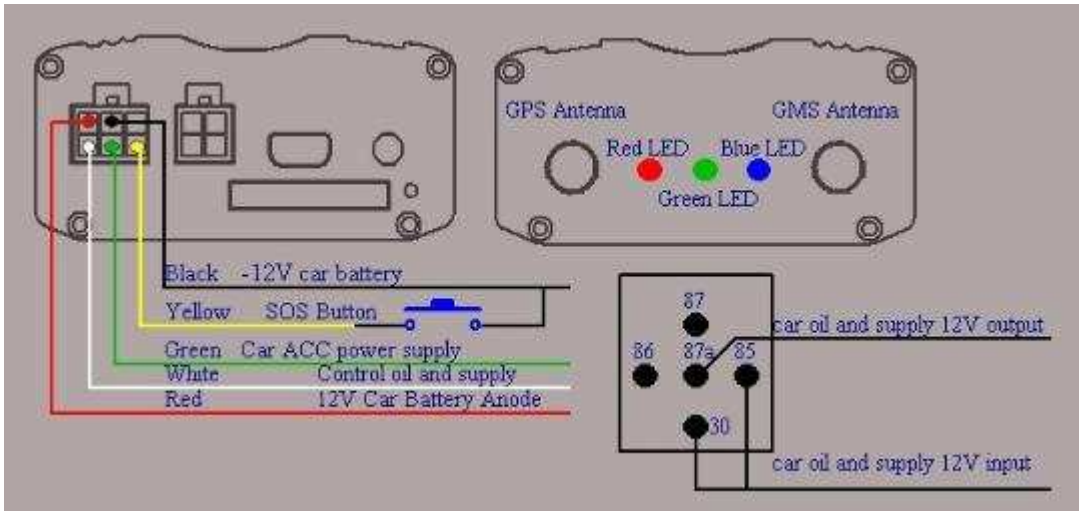
1. Select SIM card

- You can use GSM card from Local Mobile.
- Make sure enough deposit in the SIM card, and support SMS/GPRS function

2. Draw out the rear cover, there is a slot for SIM card. Then push the card into the slot until it fully inlays, and ensure that it locks well.

Note: SIM card slot is a power switch, if long-term non-use, please remove the SIM card slot to prevent the machine run out of battery

2.6 Wiring diagram：



The external 5 wires of TLT-1C GPS/GSM tracker are as follows. Red for the 12V car power wire, connect to the car battery anode; Black for the earth GND, connect to the car battery cathode; Yellow for the SOS for help Control wire, connect external SOS switch button to car battery cathode; green wire connect ACC car power supply, that is, with the car CD, radio, and other automotive electrical appliances in parallel. White for cut-off oil and power control wire, connect to the relay coil 86, i.e. one end. Relay 85, i.e. anther end connects to oil and power supply 12V. 30, 87a are normal closed-end, series in the oil and power supply circuit. Please note that if the installation of lead wire is right, if errors installation led to the equipment damage, At Own Risk, the company is not responsible for it.

Specific applications

When you read the above-mentioned brief introduction of the product, the product has been

installed, SIM card has been installed. Start following the specific use.

The first step. To become masters of products and store telephone numbers. Only had phone numbers stored, the product will respond to the other commands to work properly. The factory configurations are in the appendix. Command is as follows:

Format: *new numbers with 4-20 figures * user password (4 figures) *location number (1-3) **

eg: *13900000000*0000*1**

Explanation: You can store 3 telephone numbers at most in advance。When TLT-1C tracker receives the instruction and confirms the user password correctly, substitutes the new number for the existing number. After success, it will send the confirmation messages (SET USER NUMBER (1-3) OK) to the sender.

Mode of the product

the product has two operating modes, one is **SMS point to point mode** and the other is **GPRS online mode**, If you only want to use cell phones to get the location when needed on the Internet map, query tools, you can choose SMS point to point mode; if you require real-time monitoring of vehicles that can use GPRS dynamic real-time online mode. Two kinds of mode switching is as follows:

SMS point to point mode

Format：700+ user password (4 figures)

eg: 7000000

Explanation：When TLT-1C tracker receives the SMS and confirms the user password correctly, it switches to the SMS application mode. After the success, it will send the confirmation messages (SET MODE OK, CURRENT MODE: SMS P2P) to the sender.

GPRS online mode

Format：710+ user password (4 figures)

eg：7100000

Explanation: When TLT-1C tracker receives the SMS and confirms the user password correctly, it switches to the GPRS application mode. After the success, it will send the confirmation messages (SET MODE OK，CURRENT MODE：GPRS) to the sender.

3.1 Position service based on SMS operation

3.1.1 Single localization request instruction

Format: 666+ user password (4 figures)

eg: 6660000

Explanation: When TLT-1C tracker receives the instruction and confirms the user password correctly, reads the GPS information. No matter whether effective, the information with the replying base station which is the set of the original software will be sent to the sender.

Data format:

Lat: Latitude Direction (+/-) Latitude Value (Accuracy for 5 after the decimal point)

Long: Longitude Direction (+/-) Longitude Value (Accuracy for 5 after the decimal point)

Speed: Speed KM/H (Accuracy for 2 after the decimal point)

Direction: Direction (Accuracy for 2 after the decimal point)

Date: Date YYYY-MM-DD

Time: Time HH：MM：SS (GMT)

BS: Base Station information

Fix: Location state (A/V)

ID: IMEI

STATE: Message state

Effective data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

ID: 353686009002030

STATE: SMS

Invalid data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: V

ID: 353686009002030

STATE: SMS

Note: If in the cold start and GPS no position, it will return to the void of information:

eg: ERROR GPS GPRMC FRAME DATA

BS: 27971054”

ID: 353686009002030

STATE: SMS

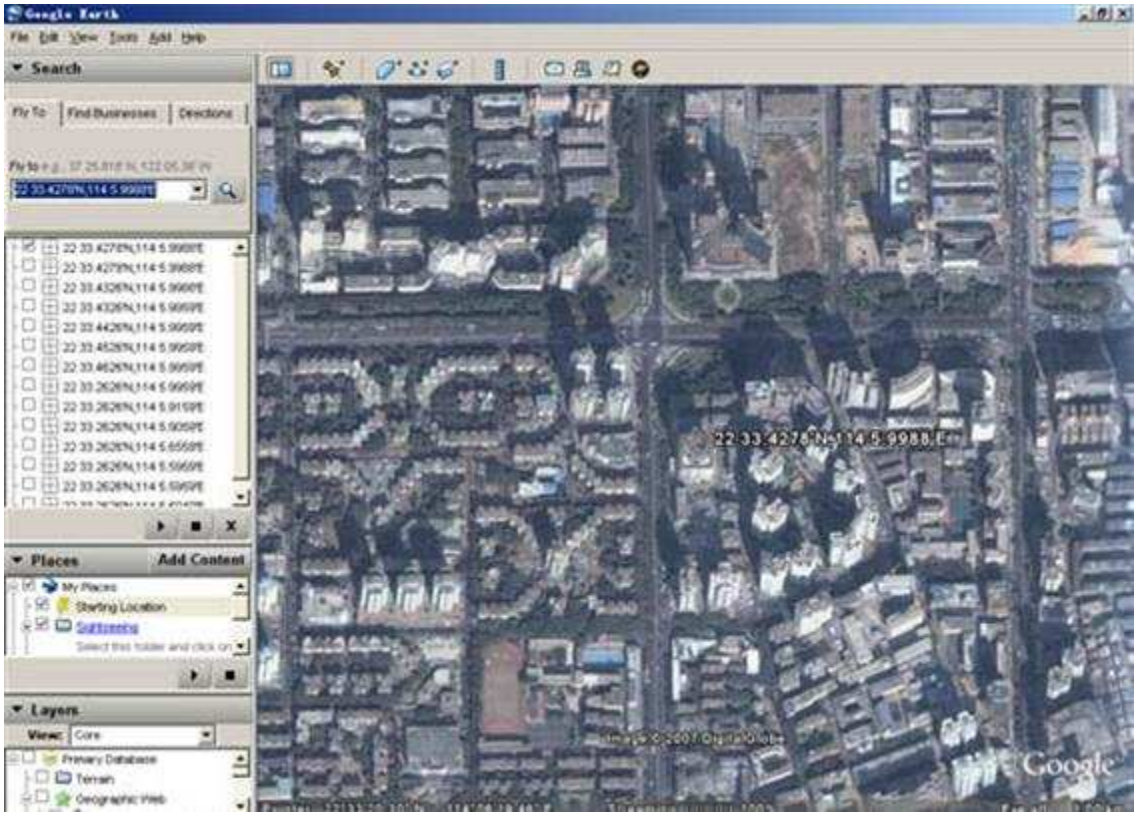
In this mode, TLT-1C can be stored three preset telephone numbers (1, 2, and 3) and a 4-digit user password. The related configuration content that users set by SMS order is non-volatile. After the success, the state has not affect by switching power, until once again receives the relevant instructions or reset operation to change.

3.1.2 Display the location on map

1) Download Google earth software from http://earth.google.com

2) Start the Google earth software. (For more information about Google earth software, please refer tohttp://earth.google.com)

As following picture shows:



(Note: pay attention to change the position date format)

Or you can start the internet explorer and copy http://maps.google.com to connect to Google map website for displaying the location map.

3）You can get the latitude & longitude date by sending “666+password” SMS command code to the GPS tracker TLT-1C . Input the latitude and longitude that you receive from SMS and click on search button, the Google earth will display the location map for you.

eg： You receive the information from the tracker. As follows:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

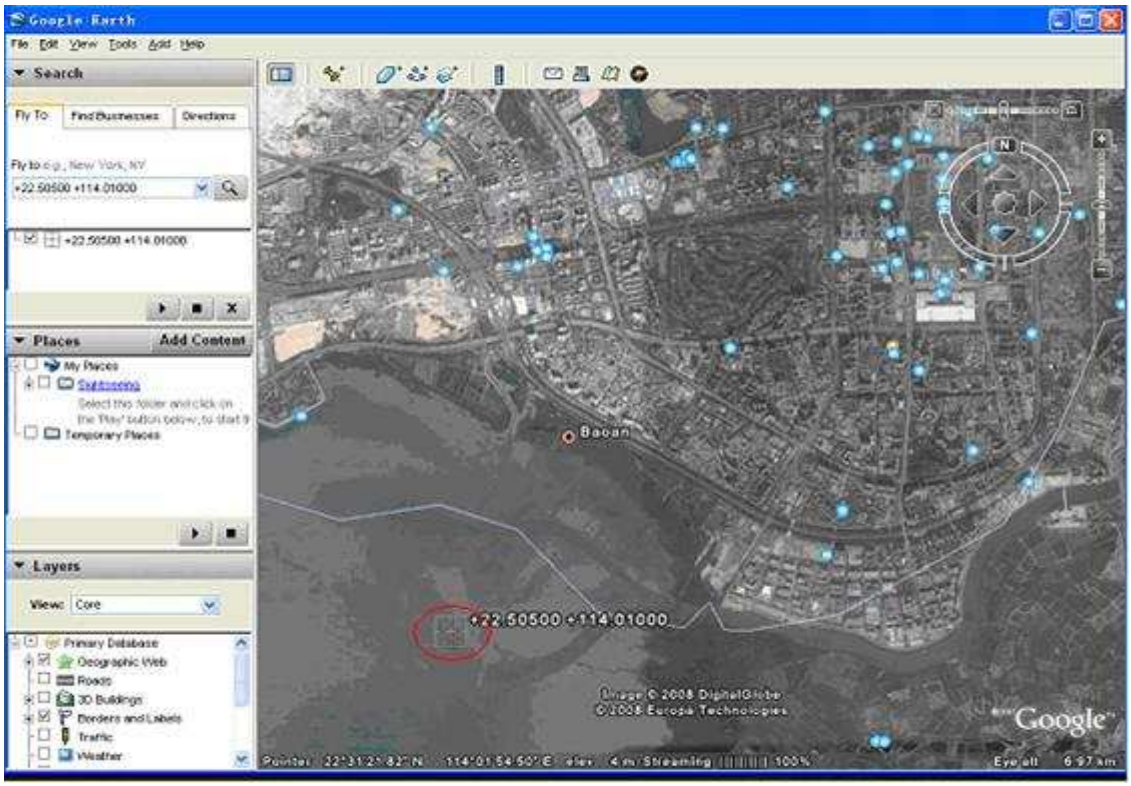
ID: 353686009002030

STATE: SMS

Search the position on the Google map, in relevant position input：

+22.50500 +114.01000

Obtain the following picture:



Or you can use local map software on PDA or car navigation device, input the position date. (*Note:* pay attention to change the position date format)

3.1.3 Cut-off electricity and oil function

1. Open the cut-off electricity and oil function

a. Command format: 900 + user password

b. Confirm command format: 901 + user password

c, Directly Command : 940+ user Password

Note : 940=900+910 , the unit will implement this command at once after receive this command.

Description: Due to the command with a certain degree of risk, so needs to do a more confirmation operation. When the user need to cut-off electricity and oil, using a mobile phone to send format a command, the device will return to: "Confirm Power OFF?" after it receives the order and confirm the user password correct. If it receives the user sending format b command in ten minutes and confirms password correct, white wire will output low level in order to control the outside relay to cut off oil and electricity. After completion, send confirmation message "POWER OFF OK" to the user.

2. Cut-off electricity and oil function to recovery command

a. Recovery command: 902 + user password

b. Confirm the recovery command: 903 + user password

Description: When the device receives the cut-off electricity and oil function to recovery command by the preset user numbers and confirms the password correct, will send the confirm information "Confirm Power ON?" to the sender, and then prepares to receive the confirm command. If within 10 minutes the device receives the users confirm command, white wire will output high level in order to control the outside relay to recovery oil and electricity. After completion, send confirmation message "POWER ON OK" to the user.

c, Recovery Command instant

941+user Password

Note : 941=902+903 the unit will implement this command at once after receive this command.

Note: This feature has a certain risk when used, such as when traveling on the highway, to send this command may cause traffic accidents, please with caution, such as non-essential Do not use.

3.1.4 Some advanced applications in SMS mode

3.1.41 Set up the user password instruction

Format: 777+new password (4 figures) +old password (4 figures)

eg: 77712340000

Explanation: When TLT-1C tracker receives the SMS and confirm the user password correctly; changes the new user password to the old password. After set successfully, it will send the confirmation messages (SET USER PASSWORD OK) to the sender.

3.1.42 GPS state setting instruction

GPS will enable on the on / off / adaptive three work states by send text messages command. GPS state is open after factory settings or reset.

1. Open the GPS instruction

Format: 222+user password (4 figures)

eg: 2220000

Explanation: When TLT-1C tracker receives the instruction and confirms the user password correctly, opens the GPS power. After the success, it will send the confirmation messages (GPS ON OK) to the sender.

2. Close GPS instruction

Format: 333+ user password (4 figures)

eg: 3330000

Explanation: When TLT-1C tracker receives the instruction and confirms the user password correctly, close the GPS. After the success, it will send the confirmation messages (GPS OFF OK) to the sender.

3. Adaptive GPS instruction（Power-saving Function）

Format: 100+ user password (4 figures)

eg：1000000

Explanation: When TLT-1C tracker receives the instruction and confirms the user password correctly, it will close the GPS immediately, and send the confirmation messages (VIBRATION

SENSOR ON OK) to the sender. The tracker built in vibration sensor, once monitors the track movement for change to open the GPS. If in 5 minutes, with not monitors the track changed in the movement to close GPS.

Note: If a long time on the highway or the flat road, the GPS may be in sleeping, and will not be awakened. Users can send 222 + user passwords to re-open the GPS.

3.1.43 Send the positional information in fixed time instruction

Format: 4 xx + user password (4 figures)

eg: 4010000

Explanation: x indicates one figure from 0 to 9, while “xx <60”, its unit is minute. while “xx >60”, its numerical value is “xx minus 60” and unit is hour, in other words, 61 is 1 hour, 62 is 2 hours, followed by analogy. When TLT-1C tracker receives the instruction and confirms the user password correctly, it establishes the current time for initial timing time, xx is the gap time, and sends the confirmation SMS to the sender’s mobile phone (TIMER START, REPEAT INTERVAL :< X>MINUTES). Then start to time and send the format as 3.1.1 setting information when it arrives the gap time, the information state item automatically updates STATE: TIMER. When “xx=00”, cancels the positional information in fixed time instruction, and sends the confirmation SMS to the sender’s mobile phone “TIMER STOP”.

Attention : at present, this version only support at best 2 hours interval , if you want to add the time of interval, please contact us, we can do this for you specially.

3.1.44 Calling switch instruction

Calling OFF format: 150 + user password (4 figures)

eg: 1500000

Calling ON format: 151 + user password (4 figures)

eg: 1510000

Explanation: When TLT-1C tracker receives the instruction to close calling and confirms the user password correctly, close the calling function (including the SOS, alarm when across the fence, and alarm when cut off power), after successfully, sent the confirm information "SET VOICE CALL: OFF" to the sender. When TLT-1C receives instruction to open calling and confirm the user

password correctly, open the calling function (including the SOS, alarm when across the fence), after successfully, sent the confirm information "SET VOICE CALL: ON" to the sender.

3.1.45 Telephone localization function

Explanation: One of 3 telephone numbers stored in advance calls in, and hangs up after ringing 2-5 times, then the TLT-1C will send the location information to this number such as 3..1.1 to this number, the information state item automatically updates STATE: CALL. But other incoming numbers will automatically hang up.

3.1.46 Monitor function

Format: 00X+ user password (4 figures)

eg：0000000

Explanation: When the tracker receives this instruction and confirms the user password correctly, according to X's value set state of the handset switch. X=1, handset closed for the monitoring mode. After set successfully, it will send the confirmation messages (SET PROFILE OK, CURRENT PROFILE: SILENT) to the sender. After handset closes, if the user phone number stored in advance calls in, the tracker will not have any prompt. After the approximately 10 seconds later automatic answering, the user may hear the tracker end the sound, but the tracker end will not hear the user. X=0, open the handset. After set successfully, it will send the confirmation messages (SET PROFILE OK, CURRENT PROFILE: NORMAL) to the sender. After handset opens, if the user phone number stored in advance calls in, the tracker will prompt. After the approximately 10 seconds later, the two sides can make calls. After the call, the V3338 will send the location information format as 3.2.16 to this calling number, the information state item automatically updates STATE: ANSWER. But other incoming numbers will automatically hang up.

Note: After factory set or reset, the state is open (Non-monitoring state)

Explanation: One of 3 telephone numbers stored in advance calls in, and automatically monitor after rings 10 seconds.. After the call, the TLT-1C will send the location information format as 3.2.16 to this calling number, the information state item automatically updates STATE: ANSWER. But other incoming numbers will automatically hang up.

3.1.47 seeking help initiatively

When press the key more than 3 seconds, it will send the location information such as 3.1.1 to 3 telephone numbers stored in advance, the information state item automatically updates STATE: SOS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), starts calling the second and the third in turn. Note: If the "Calling State" function is off, it will not call the user telephone number, and only send messages to the present number.

3.1.48 Alarm when cut off power function

1. Open command o: 011 + user password

eg: 0110000

2. Close command: 010+user password

eg: 0100000

Description: When the TLT-1C receive the armament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information "DEFENCE ON", into the armament state after 10 seconds. When the main external power supply was illegally cut off, the TLT-1C will automatically send the current location information format as 3..1.1 to the 3 preset numbers, STATE items for: DEF. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), starts calling the second and the third in turn. When the TLT-1C receives the disarmament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information "DEFENCE OFF", repeal disarmament. TLT-1C is no longer monitor the illegal cutting external power supply case.

Note: 1. After leave factory or reset, it is the disarmament state. It does not effect by boot until receives the command or reset.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the preset number.

3.1.49 Electronic fence function

Electronic fence takes the set coordinates as the center, the set radius parameters to determine the scope of the fence. When open this feature, once the TLT-1C beyond the scope of the set fence, it will send location information as to 3..1.1 to the 3 preset numbers. The information state item automatically updates STATE: OS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

When the TLT-1C re-enters the fenced area, it will immediately send location information format 3..1.1 to the three preset numbers. The information state item prompts STATE: RS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

1) Set the scope of the fence

According to the input formats different of coordinates, user can choose the format as follows instructions to operate.

Format1：003+ user password E/Wdddmm.mmmmN/Sdd.mmmmRzzz.z

eg: 003xxxxE11406.0024N2233.4230R1

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Edddmm.mmmm is longitude information with units of degrees and minutes, and the ddd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Ndd.mmmm is latitude information with units of degrees and minutes and the dd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages “SET GEO-FENCE OK” to the sender.

Format2：004+ user password E/Wddd.dddddN/Sdd.dddddRzzz.z

eg：0040000E113.10004N22.55705R999.9

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Eddd.ddddd is longitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Ndd.ddddd is latitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages “SET GEO-FENCE OK” to the sender.

Note: 1. Radius of the fence can not exceed the definition of its domain; the value of the decimal part for zero must input zero fill. For example: R=1, it is important to enter into 1.0.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the present number.

3. Degree and minute is divided into hexadecimal system converter, that is, 1d = 60m

Format 3 : 005+User Password Rzzz.z

eg: 0050000R0.1

Note : When this unit receive this command and confirm the password is right. And read the Update gps data whether is available. If ok, take the lat/log to the coordination, and the R for The Radius, and also pen the Geofence at the same time. If the configuration is ok. The unit Will send "set geo fence ok " to the sender. If the update GPS Data void, the unit will give up and then red the next one, if the unit can't receive the data above 50sec, the unit will send A message to the sender which is "ERROR GPS DATA, TRY AGAIN LATER"

After set ok, the unit will come back the original state.

2) open the electronic fence: 211 + user password

After set successfully, it will send the confirmation messages “GEO-FENCE ON” to the sender.

3) close the electronic fence: 210 + user password” ERROR GPS DATA, TRY AGAIN LATER"

After set successfully, it will send the confirmation messages “GEO-FENCE OFF” to the sender.

3.1.50 Speed alarm function instruction

format: # 122 # Password # X # #

example: # 122 # 0000 # 250 # #

Note: X is the speed reference value, the data type integer, unit to kilometers / hour (KM / H), defined domain 【0,999. 】 When the TLT-1C received the order to confirm the user password is correct, it will speed reference value X set, X = 0 Shi then turn off speed alarm function, X =! 0 to opened speed alarm function, after the success, send to pre-existing user Send confirmation message "SET RATE LIMIT: X. when the speed alarm function is turned on, TLT-1C began to read the speed of GPS data, and comparison with X real-time. If the GPS speed is greater than in X, then the instructions at this time speeding, TLT-1C immediately to send location information as 3..1.1 to pre-existing phone numbers, information in the status prompt for the STATE: OVER SPEED. s if it detects the speed of GPS is less than X, then means the rate of return to a safe speed driving, TLT-1C immediately send location information as 3.1.1 formats to phone numbers, information in the status prompt for the STATE: SAFE SPEED.

3.1.51 Upload the history data

Record the history data:

If you want to use this function in SMS Mode, you need to change the mode in GPRS and set the IP, APN, the detail way you can see the manual.

1, configuration

Format: #807#user password #X##

Note: X is frequency, the area is (0,999), the unit is "second". When the unit receives this command and confirms the password is right. And set the history frequency is X. When the X=0, that's close the function. If X=30, that's mean that the unit will save the data every 30se, if the command is ok, then send "SET SAMPLEING OK" to the unit.

1, the memory of every data is 100B

2, the memory of the unit for the history is 864KB. For example, if you set the X=30, it's about can save the data of three days. If X=300, it's about can save the data of thirty days. When the data is above 864KB, the next new data will cover the oldest data.

3, if the air sensor is open and also the unit is not move for a long time, the history record will close and the unit will open once the unit is moving again.

2, Upload the history data

A: upload the history data of 24h

Format: #808#user password #24##

When the unit receives this command and confirms the password is correct, then send "START UPLOAD ALL HISTORY RECORD" and then send all of the data to the server. The format is like

3.2.16 .the state is "STORAGE"

3.1.52 Low voltage warning

When the TLT-1C ’s working voltage lower than the set, to read the GPS information, whether or not effective, immediately send the format as 3..1.1 location information to the three stored numbers, the information state item automatically updates STATE: LP. Send a total of three times, each time one minute interval.

3.1.53 ACC detection charging

TLT-1C testing the status of walking can by external ACC to achieve walking car (ACC opened), charging car batteries on the TLT-1C built-in battery, parking (ACC off), and stop to charge in Built-in battery.

3.2 The operation based on the GPRS application

In this mode, TLT-1C can be stored three preset telephone numbers (1, 2, and 3), a 4-digit user password, a group of TCP / IP server IP address and port number, 4-digit GPS password and access point name of GPRS. The related configuration content that users set by SMS order is non-volatile. After the success, the state has not affect by switching power, until once again receives the relevant instructions or reset operation to change.

Three major steps

1. Set up the access point name of GPRS

Format1：#803#user password#APN##

eg：#803#0000#CMNET##

Format2：#803#user password#APN#APN user name#APN password ##

Explanation1: Different GSM / GPRS service associations provide different APN, please according to local service providers to provide the APN to choose format 1 or 2 to use set.

Explanation2: When TLT-1C tracker receives the instruction and confirms the user password correctly, updates the access point name to the new access point name. After the success, it will send the confirmation messages to the sender. If sent the format 1, the content is “SET GPRS APN OK”; if it is format 2, the content is “SET GPRS ACCOUNT OK”.

Note: APN is CMNET after factory set or reset. APN is characters composed of 3 to 35 letters, numbers, dots (.) underscore (_) and connectors (-). APN user name and user password are respectively characters composed of from 3 to 20 the numbers and letters.

2. Set up the TCP/IP server and IP's address and port number

Format：#804#user password#fixed IP address # port ##

eg：#804#0000#222.125.12.32#80##

Explanation: When TLT-1C tracker receives the instruction and confirms the user password correctly, updates the IP address and port number preserved in the module，After the success, it will send the confirmation messages to the sender. The content is "SET SERVER IP AND PORT OK"

3. Upload data settings

There are 2 modes in this setting:1. Track the vehicle in driving, 2.Save energy when vehicle stoped.This 2 modes will automatic switch-over according to the ACC state of vehicle.It is the first mode when ACC is on, it is the second mode when ACC is off.According the difference of GPS Sampling time and Upload the message. Uploading the data very dense when driving, so can describe the tracking very detailed. And uploading the data very sparse when the vehicle stopped, so can save the GPRS fee and also can see the tracking data. When change the mode in upload data in certain time function , the unit will upload data from memory area of the unit. 1.

1). Uploading in normally way

Format：#805#user password# sampling interval T # the number of upload data each time N ##

eg：#805#0000#6#10##

Explanation: The time T unit of the sampling is second, 10 seconds at least，59999 seconds at most；The number of upload data each time is N, at least is 1, at most is 50. Sampling interval T and the number of upload data each time N product should meet greater-than-equal 60, that is T*N≥60.

When setting parameters T * N <60, the device will automatically correct sampling interval T to meet the uploading constraints. When TLT-1C tracker receives the instruction and confirms the user password correctly, sends the confirmation messages to the sender. The content is "SET GPS SAMPLING TIME AND QUANTITY OK". At the same time as specified in the instructions to the sampling interval time T, continuous read the GPS data and preserve to the memory block. When the

memory block reaches to the “number of upload each time N” setting, it starts connecting to the GPRS servers to send out the format as 3.2.10 information, and the state item automatically updates STATE: AUTO. When “the number of upload each time N = 0” it will close the upload data setting and send the confirmation messages to the sender. The content is “GPRS TIMER STOP”。

2) , throttle timing upload mode

Format: # 809 # Password # x # y # #

Function Description: The sampling time x units is second, defined domain 【10,59999】 each upload the data of the number isy, defined domain 【1.50】. When the TLT-1C, after receipt of the order, confirms the user password is correct, the sender will send confirmation SMS: GPRS REPORT SAMPLING 2 OK ". At the same time as specified in the sampling interval X, a continuous reading GPS NEMA data The $ GPRMC statement, and stored in memory. When the number of articles stored in the user set up each time you upload a few of Y, we began to connect GPRS server and the data sent. If the result of the network, or other causes data is not sent to the server, the data is automatically backed up, when the network returned to normal after the replacement data to the server. From the data shown in formats such as 3.2.10, the data in the state marked as AUTOLOW. When you set "Every time I upload the data of the number of Y "is 0, then close the regular upload and send a confirmation to the sender SMS: GPRS REPORT SAMPLING 2 STOP.

Note: the setting is not affected switch plane until it received further changes to the relevant instructions or reset operation.

Implement the above three-step basic settings, you can see vehicle running track on monitor platform; monitor the movements of the vehicle.

Advanced applications in GPRS mode

3.2.11 Set up the user password instruction

Format: 777+new password (4 figures) +old password (4 figures)

eg: 77712340000

Explanation: Confirm the user password correctly; changes the new user password to the old password. After set successfully, it will send the confirmation messages (SET USER PASSWORD OK) to the sender.

3.2.12 GPS state setting instruction

GPS will enable on the on / off / adaptive three work states by send text messages command. GPS state is open after factory settings or reset.

1 Open the GPS instruction

Format: 222+user password (4 figures)

eg: 2220000

Explanation: When TLT-1C tracker receives the instruction and confirms the user password correctly, opens the GPS power. After the success, it will send the confirmation messages (GPS ON OK) to the sender.

2 Close GPS instruction

Format: 333+ user password (4 figures)

eg: 3330000

Explanation: When TLT-1C tracker receives the instruction and confirms the user password correctly, close the GPS. After the success, it will send the confirmation messages (GPS OFF OK) to the sender.

3 Adaptive GPS instruction（Power-saving Function）

Format: 100+ user password (4 figures)

eg：1000000

Explanation: When TLT-1C tracker receives the instruction and confirms the user password correctly, it will close the GPS immediately, and send the confirmation messages (VIBRATION SENSOR ON OK) to the sender. The tracker built in vibration sensor, once monitors the track movement for change to open the GPS. If in 5 minutes, with not monitors the track changed in the movement to close GPS.

Note: If a long time on the highway or the flat road, the GPS may be in sleeping, and will not be awakened. Users can send 222 + user passwords to re-open the GPS.

3.2.13 Single localization request instruction

Format: 666+ user password (4 figures)

eg: 6660000

Explanation: When TLT-1C tracker receives the instruction and confirms the user password correctly, reads the GPS information. No matter whether effective, the information with the replying

base station which is the set of the original software will be sent to the sender.

Data format:

Lat: Latitude Direction (+/-) Latitude Value (Accuracy for 5 after the decimal point)

Long: Longitude Direction (+/-) Longitude Value (Accuracy for 5 after the decimal point)

Speed: Speed KM/H (Accuracy for 2 after the decimal point)

Direction: Direction (Accuracy for 2 after the decimal point)

Date: Date YYYY-MM-DD

Time: Time HH：MM：SS (GMT)

BS: Base Station information

Fix: Location state (A/V)

ID: IMEI

STATE: Message state

Effective data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

ID: 353686009002030

STATE: SMS

Invalid data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: V

ID: 353686009002030

STATE: SMS

Note: If in the cold start and GPS no position, it will return to the void of information

Eg: ERROR GPS GPRMC FRAME DATA

BS: 27971054

ID: 353686009002030

STATE: SMS

3.2.14 Change the user name

Format: #801#user password#new user name##

eg：#801#0000# username##

Explanation: When TLT-1C tracker receives the instruction and confirms the user password correctly, changes the user name to the new user name. After the success, it will send the confirmation messages to the sender. The content is “CHANGE USERNAME OK”.

3.2.15 Change the service password

Format：#802#user password#new service password#old service password ##

eg：#802#0000#1111#0000##

Explanation: When TLT-1C tracker receives the instruction, confirms the user password and old service password correctly, changes the service password to the new service password. After the success, it will send the confirmation messages to the sender. The content is “CHANGE PASSWORD OK”

3.2.16 Upload the location instruction at once

Format：#806#user password##

eg：#806#0000##

Explanation: When TLT-1C tracker receives the instruction and confirms the user password correctly, sends the confirmation messages to the sender. The content is “START GPRS UPLOAD”.

At the same time, send the data from the memory block to server.

Upload format:

#IMEI # user name #service password #condition

data quantity #the base station's information $ GPRMC…….. # the base station's information $ GPRMC…….

eg:

#123456789000001#TLT-1C #0000#SMS#3

#25ee0dff$GPRMC,083945.180,A,2233.4249,N,11406.0046,E,0.00,315.00,251207,,,A*6E

#25ee0dff$GPRMC,083950.180,A,2233.4249,N,11406.0046,E,0.00,315.00,251207,,,A*6E

#25ee0dff$GPRMC,083955.180,A,2233.4249,N,11406.0046,E,0.00,315.00,251207,,,A*6E ##

Note: Immediately upload data format for the state: SMS.

3.2.17 Calling switch instruction

Calling OFF format: 150 + user password (4 figures)

eg: 1500000

Calling ON format: 151 + user password (4 figures)

eg: 1510000

Explanation: When TLT-1C tracker receives the instruction to close calling and confirms the user password correctly, close the calling function (including the SOS, alarm when across the fence and alarm when cut off power), after successfully, sent the confirm information "SET VOICE CALL: OFF" to the sender. When TLT-1C receives instruction to open calling and confirm the user password correctly, open the calling function (including the SOS, alarm when across the fence), after successfully, sent the confirm information "SET VOICE CALL: ON" to the sender.

3.2.18 call to Upload

Explanation: One of 3 telephone numbers stored in advance calls in, hangs up after ringing 2-5 times. Dispose as 3.2.10，the state item automatically updates STATE: CALL.

3.2.19 Monitor function

Format: 00X+ user password (4 figures)

eg：0000000

Explanation: When the tracker receives this instruction and confirms the user password correctly, according to X's value set state of the handset switch. X=1, handset closed for the

monitoring mode. After set successfully, it will send the confirmation messages (SET PROFILE OK, CURRENT PROFILE: SILENT) to the sender. After handset closes, if the user phone number stored in advance calls in, the tracker will not have any prompt. After the approximately 10 seconds later automatic answering, the user may hear the tracker end the sound, but the tracker end will not hear the user. X=0, open the handset. After set successfully, it will send the confirmation messages (SET PROFILE OK, CURRENT PROFILE: NORMAL) to the sender. After handset opens, if the user phone number stored in advance calls in, the tracker will prompt. After the approximately 10 seconds later, the two sides can make calls. After the call, the V3338 will send the location information format as 3.2.16 to this calling number, the information state item automatically updates STATE: ANSWER. But other incoming numbers will automatically hang up.

Note: After factory set or reset, the state is open (Non-monitoring state)

3.2.20 Upload the emergency case

Explanation: When press the SOS key more than 3 seconds, it will do like 3.2.16 instruction, the information state item automatically updates STATE: SOS. At the same time, it will call the first preset user telephone number. If it is unsuccessful (closed or unable to connect or no response), starts calling the second and the third in turn.

Note: If the calling state is off, it will not call the user telephone number, and only send messages to the server.

3. 2. 21 Alarm when cut off power function

1. Open command: 011 + user password

eg: 0110000

2. Close command: 010+user password

eg: 0100000

Description: When the TLT-1C receives the armament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information "DEFENCE ON”, into the armament state after 10 seconds. When the main external power supply was illegally cut off, the TLT-1C will automatically send the current location information format as 3.2.16 to the server, STATE items for: DEF. When the TLT-1C receives the disarmament command from the preset number and verifies the user password correct, after success, it will respond to confirm the information "DEFENCE OFF”, repeal disarmament. TLT-1C is no longer monitor the

illegal cutting external power supply case.

Note: 1. After leave factory or reset, it is the disarmament state. It does not effect by boot until receives the command or reset.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the server.

3. 2. 22 Electronic fence function

Electronic fence takes the set coordinates as the center, the set radius parameters to determine the scope of the fence. When open this feature, once the TLT-1C beyond the scope of the set fence, it will send location information as to 3.2.16 to the server. The information state item automatically updates STATE: OS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

When the TLT-1C re-enters the fenced area, it will immediately send location information format 3.2.16 to the server. The information state item prompts STATE: RS. At the same time, call the first user telephone number. If it is unsuccessful (closed or unable to connect or no response), makes vibration and starts calling the second and the third in turn.

1) Set the scope of the fence

According to the input formats different of coordinates, user can choose the format as follows instructions to operate.

Format1：003+ user password E/Wdddmm.mmmmN/Sdd.mmmmRzzz.z

eg: 003xxxxE11406.0024N2233.4230R1

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Edddmm.mmmm is longitude information with units of degrees and minutes, and the ddd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero cannot bypass)

Ndd.mmmm is latitude information with units of degrees and minutes and the dd expresses degree, mm.mmmm expresses minute (Accuracy for 4 after the decimal point, the following zero

cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages “SET GEO-FENCE OK” to the sender.

Format2：004+ user password E/Wddd.ddddd N/Sdd.dddddRzzz.z

eg：0040000E113.10004N22.55705R999.9

Explanation: E-- east longitude; W-- west longitude; N-- north latitude; S-- south latitude. In this example, uses E and N, please according to the actual geographical position choose corresponding coordinate form to set. In the demonstration, meanings of various parts are as follows:

Eddd.ddddd is longitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Ndd.ddddd is latitude information with units of degrees, and the ddd.ddddd expresses degree (Accuracy for 5 after the decimal point, the following zero cannot bypass)

Rzzz.z is radius for the domain (999.9 - 0.1), unit for KM.

When the tracker receives this instruction, judges to be authorized users and confirms the user password correctly, it will send the confirmation messages “SET GEO-FENCE OK” to the sender.

Note: 1. Radius of the fence can not exceed the definition of its domain; the value of the decimal part for zero must input zero fill. For example: R=1, it is important to enter into 1.0.

2. If the calling state is off, it will not call the user telephone number, and only send messages to the present number.

3. Degree and minute is divided into sexagesimal system converter, that is, 1d = 60m

Format 3 : 005+User Password Rzzz.z

eg: 0050000R0.1

Note : When this unit receive this command and confirm the password is right. And read the Update gps data whether is available. If ok, take the lat/log to the coordination, and the R for The Radius, and also pen the Geofence at the same time. If the configuration is ok. The unit Will send "set geo fence ok " to the sender. If the update GPS Data void, the unit will give up and then red the next one, if the unit can't receive the data above 50sec, the unit will send A message to the sender which is "ERROR GPS DATA, TRY AGAIN LATER"

After set ok, the unit will come back the original state.

Attention :

1, Radius can't above the area, The decimal fraction need add 0 if the number is not correct.

2, if the "calling state" is off, the unit only will send message to the sender and not call the sender.

3, 1° =60′

2) open the electronic fence: 211 + user password

After set successfully, it will send the confirmation messages “GEO-FENCE ON” to the sender.

3) close the electronic fence: 210 + user password

After set successfully, it will send the confirmation messages “GEO-FENCE OFF” to the sender.

3. 2. 23 Cut-off electricity and oil function

1. Open the cut-off electricity and oil function

a. Command format: 900 + user password

b. Confirm command format: 901 + user password

Description: Due to the command with a certain degree of risk, so needs to do a more confirmation operation. When the user need to cut-off electricity and oil, using a mobile phone to send format a command, the device will return to: "Confirm Power OFF?" after it receives the order and confirm the user password correct. If it receives the user sending format b command in ten minutes and confirms password correct, white wire will output low level in order to control the outside relay to cut off oil and electricity and back to confirm SMS: POWER OFF OK.

c, Directly Command : 940+ user Password

Note : 940=900+910 , the unit will implement this command at once after receive this command.

2. Cut-off electricity and oil function to recovery command

a. Recovery command: 902 + user password

b. Confirm the recovery command: 903 + user password

Description: When the device receives the cut-off electricity and oil function to recovery command by the preset user numbers and confirms the password correct, will send the confirm information "Confirm Power ON?" to the sender, and then prepares to receive the confirm command. If within 10 minutes the device receives the users confirm command, white wire will

output high level in order to control the outside relay to recover oil and electricity. After completion, send confirmation message "POWER ON OK" to the user.

c, Recovery Command instant

941+user Password

Note : 941=902+903 the unit will implement this command at once after receive this command.

3.2.24 Over speed Alarm Function

Format:#122#Password#X##
Eg: #122#0000#250##
Note: X is mean reference value, and the unit is mail/hours(KM/H), the area is (0,999), when the unit receives this command and confirm the password is correct, Then implement this command. X=250 is mean that when the speed of the car is Above 250KM/H, the unit will send a message to the threes users ,the format is like 3.2,16, and the state is "OVER SPEED". At this time, if the speed of the car is lower as 250KM/H, then the unit will send a message to the send which the state is "SAFE SPEED"
When you set the X==0, and at this time, the unit will close this function, when you set the X≠0, open this function, and then send a message to the sender which is "SET RATE LIMIT:X"

3.2.25 Upload the history data

Record the history data:
If you want to use this function in SMS Mode, you need to change the mode in GPRS and set the IP, APN, the detail way you can see the manual.
1, configuration
Format : #807#user password #X##
Note: X is frequency, the area is (0,999), the unit is "second". When the unit receive this command and confirm the password is right. And set the history frequency is X. When the X=0, that's close the function. If X=30, that's mean that the unit will save the data every 30se, if the command is ok, then send "SET SAMPLEING OK" to the unit.
1, the memory of every data is 100B
2, the memory of the unit for the history is 864KB. For example, if you set the X=30, it's about can save the data of three days. If X=300, it's about can save the data of thirty days. When the data is above 864KB, the next new data will cover the oldest data.
3, if the air sensor is open and also the unit is not move for a long time, the history record will close and the unit will open once the unit is moving again.

2, Upload the history data
A: upload the history data of 24h
Format: #808#user password #24##
When the unit receives this command and confirms the password is correct, then send "START UPLOAD ALL HISTORY RECORD" and then send all of the data to the server. The format is like 3.1.16 .the state is "STORAGE"
B: Read all of the history record
Format: #808#0000##

Note: when the units receives this command and confirm the password is correct. Then send the message to the sender which is "START UPLOAD 24H HISTORY RECORD" and then send all of the data to the server. The format is like 3.2.16 .the state is "STORAGE"

3.2.26 Low voltage upload

Explanation: When the TLT-1C ’s working voltage lower than the set, it will do like 3.2.16 instruction, the data state items automatically add “LP” to aid current status. Send a total of three times, each time one minute interval.

3. 2. 27 ACC detect charge function

Description: TLT-1C using ACC detect line achieve car battery charge the TLT-1C built-in battery when driving, stop charging when parking.

4.1 Assistant function:

1、Command Resume : *RESET#0000##。
Note: use this command can resume to the initial configuration

2、Command Restart*RESTART#0000##
Note: this command only restart TLT-2V5, and don't restart the configuration

3、Read the present configuration
Command：*GTAS#
Note : when the unit receive this command, the unit will send all of the configuration to the sender
Format：
IMEI: Identity
MOD: point to point（ SMS P2P 2）/SMS（SMS SC）/GPRS
GPS:（ON）/(OFF)/(AUTO)
HFR: hand free
MTPRF: monitor（SILENT）/（NORMAL）
BS: basestation
GEO-FENCE=ON/OFF longitude,longitude data latitude, latitude data Radius （at least 0.1KM）
GEO-FENCE STATE:RS/OS
DEFENCE：ON/OFF the switch of alarm when cut off the electricity
VOICE：ON/OFF the switch of calling
POWER：ON/OFF the switch of cut oil and power
RATE：XX over speed
ST: the interval time when receive the position
TN: request number in the SMS Mode
GU: GPRS user name, password

SRV: IP, Port
APN:,,GPRS port, APN user name ， APN password
SAMP: sampling interval, the number of sampling (tracking when driving)
SAMP2：Sampling interval, the number of sampling (tracking when vehicle stop)
HISTORY SAMP

4、 Read all of the number and password
Format：*GTAN#
Note：When the unit receives this command, the unit will send all of the number and password to the sender including center number and center password and user number and user password.
Data Format：
U1: Number one, Password
U2: Number two, Password
U3:Number three, Password
SC: Center Number, Service Password

4.2 State marked

1, point to point model

666 single request	SMS
4XX timer sending	TIMER
Call for positioning	CALL
Answer the call	ANSWER
CALL for help	SOS
out of the fence	OS
enter into fence	RS
over speed alarm	OVER SPEED
safe speed	SAFESPEED
historical data upload	STORAGE
low power alarm	LP

2, GPRS model

666 one-time request	SMS
806 single-location sending	SMS
moving Upload	AUTO
stop upload	AUTOLOW
phone upload	CALL

monitoring	ANSWER
Emergency	SOS
out of the fence	OS
enter into fence	RS
over speed alarm	OVER SPEED
safe speed	SAFESPEED
historical data upload	STORAGE
low power alarm	LP

4.3 Reset the state list

configuration	state	configuration	state	configuration	state
Working mode	Point to point	Stored calls	Empty	password	0000
GPS	On	Timing send	Stop	Number of stations	1
power	on	e-fence	Off	ANP	CMNET
User name	V500	GPRS password	0000	IP address	0.0.0.0 0000
Timing upload	stop	Historical data sample	stop	Historical data upload	stop

4. 4 Instruction Set

Instruction	Explanation
700+ user password	SMS Mode
710+ user password	GPRS Mode
000+password	Turn off the handset
001+password	Turn on the handset
003+ user password E/Wdddmm.mmmm N/Sddmm.mmmmRzzz.z	Set the scope of the fence (units of degrees and minutes) in two modes

004+ user password E/Wddd.dddddN/Sdd.dddddRzzz.z	Set the scope of the fence (units of degrees) in two modes
005+passwordRzzz.z	Set the scope of the fence(Current position coordinates)
010+ user password	Disarmament in two modes
011+ user password	Armament in two modes
#122#password#x##	Set alarm of over speed
100+ user password	Open power-saving function in two modes
150+ user password	Close calling instruction in two modes
151+ user password	Open calling instruction in two modes
211 + user password	Open the electronic fence in two modes
210 + user password	Close the electronic fence in two modes
222+ user password	Open GPS In two modes
333+ user password	Close GPS In two modes
4xx+ user password	Regularly upload in SMS mode
666+ user password	Return single localization to user number in two modes
777+new password + old password	Change user password in two modes
900+ user password	Cut-off electricity and oil in advance function in two modes
901+ user password	Cut-off electricity and oil function in two modes
902+ user password	Cut-off electricity and oil to recovery in advance command in two modes
903+ user password	Cut-off electricity and oil to recovery command in two modes
940+password	Single construction to cut off the oil and power
941+password	Recovery the construction of cut off the oil
new numbers user password *location number**	Change the telephone number in advance in two modes

#801#user password # new user name##	Change the user name in GPRS mode
#802#user password # new service password # old service password ##	Change service password in GPRS mode
#803# user password #APN##	Set up access GPRS points in GPRS mode
#803# user password #APN#APN user name# APN password##	Set up access GPRS points in GPRS mode
#804#user password # fixed IP address # port ##	Set up TCP / IP server's IP address and port number in GPRS mode
#805#user password# sampling interval T # the number of upload data each time N##	Upload data set in GPRS mode
#806# user password ##	Upload the current position immediately in GPRS mode
#807#password#x##	Set historical sampling rate
#808# password#24##	Uploading the 24 hours historical data
#808#password##	Uploading all the historical data
#809#password#x#y##	Uploading data in Parking throttling mode
*GTAN# user password##	Read all the current numbers, passwords
*GTAS# user password##	Read current settings
*GTAN#	Read all the phone numbers and password
*GTAS#	Read all the settings